

PCAS 18 (2015/2016)

**Critical Literature Review
(ANTA602)**

***The effectiveness of the Environmental Impact
Assessment process in Antarctica***

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Word count: 1850

Abstract (ca. 200 words):

Environmental Impact Assessment in Antarctica is outlined within the Madrid Protocol of 1991 and stipulates that all activities which are conducted South of 60 degrees must undergo an Environmental Impact Assessment before proceeding. This report will deal with the effectiveness of the EIA processes which are in place under the Madrid Protocol and the issues which are outstanding within the processes that take place.

Introduction

The Antarctic Treaty, conceived after the International Geophysical year of 1957/58, is the main body of international law that governs the activities of Antarctica. The Treaty puts a hold on all territorial claims on the continent and designates Antarctica as an international stronghold for scientific and peaceful pursuits, while also outlining the intention of conservation and preservation of Antarctic resources.

Within the Treaty System, the Madrid Protocol, or the Protocol on Environmental Protection to the Antarctic Treaty, was adopted in 1991 and entered into force in 1998. The Madrid Protocol deals specifically with the preservation of the Antarctic environment and designates Antarctica as a “natural reserve, devoted to peace and science” (Madrid Protocol, 1991). The Protocol outlines a number of environmental requirements that signatories must abide by in order to carry out operations in Antarctica, including operational annexes.

The Environmental Impact Assessment (EIA) arm of the Protocol is outlined in Article 8 of the Madrid Protocol and the processes by which it runs are stipulated in Annex 1, which acts as an operational framework for the EIA process. The EIA process has become one of the most significant, yet still hotly debated, facets of the Madrid Protocol, with Hemmings et al describing it as “the de facto gatekeeper for Antarctic activity” (2010). Therefore, judging and determining the effectiveness of the Antarctic EIA process is integral in showing the successes and failures of the Madrid Protocol as a whole, as well as being able to lead future management decisions.

This report will address the effectiveness of the EIA process under the Madrid Protocol since its inception in 1998. By analyzing current literature on the topic, it will gain a comprehensive insight into the overall effectiveness of the EIA process and will outline potential future directions from this.

Environmental Impact Assessment within the Madrid Protocol

Article 8 of the Madrid Protocol stipulates that proposed activities in Antarctica will be “subject to the procedures set out in Annex I for prior assessment of the impacts of those activities on the Antarctic environment or on dependent or associated ecosystems” (Madrid Protocol, 1991). Article 8 then goes on to state that activities will be based on whether the activity is deemed to have one of three impacts on the environment, these being:

- less than a minor or transitory impact
- a minor or transitory impact
- more than a minor or transitory impact

Annex 1 of the Protocol outlines the process of environmental impact assessment that activities must undertake before going forward in the Antarctic. The Annex consists of three levels of environmental impact assessment, based on the definitions above. The three levels of EIA are the Preliminary Environmental Evaluation (PEE), the Initial Environmental Evaluation (IEE) and the Comprehensive

Environmental Evaluation (CEE). Preliminary Environmental Evaluations are simply for activities which will only have a less than minor or transitory impact. These activities can go ahead without any further environmental scrutiny if they are deemed to be at this level. The Initial Environment Evaluations are for activities which may have more than a minor or transitory impact, after which the activity may proceed or otherwise may need to undergo a CEE. Comprehensive Environmental Evaluations are reserved for activities that are deemed to have more than a minor or transitory impact on the Antarctic environment and must then go through a rigorous assessment in order to fulfill the obligations of the Protocol. All activities which have undergone a Comprehensive Environmental Evaluation must be presented to the Antarctic Treaty Consultative Meeting (ATCM) and achieve consensus in order to go ahead. Furthermore, in Article 5 of the Annex, it is stated that monitoring is required of activities which have required a CEE in order to assess whether the impacts of the activity are in accordance to the Protocol (Madrid Protocol, 1991).

Through the Madrid Protocol, the Committee for Environmental Protection (CEP) was established in Article 11 and is integral in the practical and functional aspects of the Protocol; specifically the EIA process. Each State that has signed onto the Protocol is entitled to be a Member of the CEP, which meets annually and reports to the ATCM each year on matters relating to the Antarctic environment, under the Madrid Protocol.

Defining *Minor or Transitory*

The definitions of minor and transitory have had a large amount of discussion surrounding them since the establishment of the Madrid Protocol. Thus far, there has been no definitive definition of the terms under the Madrid Protocol, although the issue has been discussed at several ATCMs. The main issues surrounding the definition of these terms is that the activities undertaken in Antarctica are of such a wide variety in a range of different environments and circumstances, which makes it hard for there to be a comprehensive and all-encompassing definition for the terms (Martinus Nijhoff Publishers, 2001). Since the Protocol is also intended to be a broad legal framework for environmental procedure, it would have seemed easier at the time of the discussions to leave the terms to be somewhat ambiguous. Therefore, the definitions of minor and transitory are open to interpretation by the States and are applied on a case by case basis.

This ambiguity may lend itself to lessening the effectiveness of the EIA process as there isn't strict classifications for the impacts that activities may have on the Antarctic environment. Further to this, it has also been discussed that the use of 'or' in 'minor or transitory' also adds confusion to the issue (Ensminger et al, 2000). Since the level at which the activity will be assessed in the EIA process is hinged on the definitions of minor and transitory, it is arguably a very important aspect in making the Protocol an effective legal framework. Many Antarctic Treaty Consultative Parties (ATCP) have contributed to this discussion, including New Zealand who proposed definitions for the terms in a Working Paper to the ATCM XXI in 1997. However, no consensus of the definitions have been officially reached and in 1999, a set of EIA guidelines were adopted at the ATCM and the 'case by case' basis for definition was enforced (Vidas, 2012). It has been argued that this openness to interpretation through the case by case logic may lead to the incorrect assessment of projects and a lack of standardization between States (Bastmeijer et al, 2008).

It has also been argued that these terms need specific definitions to be fitted to the Antarctic environment, since activities that may be deemed 'minor' or 'transitory', may actually lead to cumulative impacts which are considered to be significant impacts (Saul et al, 2015). However, Annex 1 of the Madrid Protocol also stipulates for cumulative impacts to be considered in the EIA processes which would hopefully mean that cumulative impacts are avoided. In a 1999 paper, Ensminger et al argued that because of the nature of the Antarctic environment where any chemical spill may last for decades on the ice, and where biological events occur at such a slow rate, the threshold for an activity having a 'transitory' impact would be very low, however it depends on whether 'transitory' simply means 'covered in snow', or if it in fact means that the spill has been completely remedied. Therefore, it was argued that these definitions must be comprehensive and are integral to the EIA process being functional and effective at conserving the Antarctic environment.

The ambiguity of the terms minor and transitory in the environmental impact assessment is something which is evidently hard to address, as has been shown at numerous ATCMs over the past decade. However, it would seem that the definitions of these terms still needs to be considered and debated as this may give clarity to what level the activities should be submitted at and therefore how the assessments should be conducted. The definition of these terms may help to make the EIA process a robust and thorough framework by which activities in Antarctica are heavily scrutinized. This in turn may lead to an overall strengthening of the Protocol as a whole and may heavily impact the conservation of the Antarctic environment into the future.

National Legislation and Implementation

The operational process of undertaking EIAs for activities within Antarctica falls back onto the signatory States which creates issues surrounding standardization and differing interpretations of the EIA process. The States which have signed onto the Madrid Protocol have an obligation to fulfill the requirements of the EIA process, which for most Consultative Parties means implementing them into national legislation in order for them to be carried out at a national level (Vidas, 2012). This means that each individual Party carries out their own EIA process for their proposed activities. For activities requiring CEEs, this means that the impact assessments must be signed off domestically before being put to the ATCM (Ensminger, 2000). Because of this, a large amount of responsibility falls onto the individual Parties in ensuring that best practice is followed in conducting their EIAs. Although there has been some discussion around standardizing the EIA process, many Parties seem content with the EIA process being dealt with internally through domestic policy (Hemmings et al). However, this opens the process up to be vulnerable to States' individual interpretations of the process and to the ambiguity that is already enshrined in the Protocol. For example, it has been argued that by having the EIAs conducted at a national level, the States may be adhering to administrative processes and procedural compliance, rather than objective environmental standards. This may lend itself to projects seeming to comply with the Protocol on paper, but when conducted in real world Antarctica, may lead to unseen impacts (Hemmings et al, 2010).

Another issue with signatory Parties conducting their own EIAs is that when they propose an activity, they determine the EIA level that they believe their activity falls beneath. This has created several issues

in the past, as some Parties have proposed activities which would appear to require CEEs as IEEs instead. This issue has arisen from a lack of a concrete definition of each of the levels of assessment, as well as a lack of triggers to assess when the assessments need to progress from one to another, or if a project should clearly be submitted as a specific level of assessment. Lyons argued in 1993 that this ambiguity comes from the fact that minor and transitory are not clearly defined and these definitions make up the bulk of each level of the EIA process (Hemmings et al, 2010). This issue particularly came to light when the Russian Federation proposed a runway in the Vestfold Hills, which many argued required a CEP, yet they submitted it to the ATCM as an IEE (which has no need of being submitted to the ATCM anyway). This episode has been commented on widely in subsequent years, with the prominent NGO, the Antarctic and Southern Ocean Coalition, stating that they believed that the Russian Federation were testing whether they could present projects which clearly needed CEPs as IEEs to the ATCM and get away with it (Martinus Nijhoff Publishers, 2001). However, there have also been cases where Parties have presented activities as CEPs to the ATCM when other Parties have believed that only IEEs were necessary (Martinus Nijhoff Publishers, 2001). Therefore, it is clear that the ambiguity and lack of standardization goes both ways depending on the individual Party.

As well as issues with the level at which activities are assessed, there are also issues around how activities are being accepted after having a CEP and being put in front of the ATCM. Since the introduction of the EIA processes, there have been no CEP activities refused or even amended in any large way. It is argued that this is due to financial and logistical viability of the project by the Party who proposes it, as well as political discussions which the Parties may have when presenting their CEP to the ATCM (Hemmings et al, 2010). This lack of refusals at what is supposed to be the most rigorous level of Antarctic EIA hints at the idea that perhaps even though CEPs are conducted, environmental standards and conservation are not at the forefront of Parties motivations (Hemmings et al, 2010).

Due to the variations in the EIA processes depending on the responsible Party, as well as in the evaluations of where activities should lie within the system, it has been stated that this may compromise the future of joint jurisdiction within Antarctica and may jeopardize the integrity of the Madrid Protocol as a whole (Hemmings et al, 2010). It has been suggested that set definitions and specific standards for the EIAs must be agreed upon in order to mitigate impacts on the Antarctic environment (Hemmings et al, 2010).

Operational Guidelines

In order to make the EIA process efficient, guidelines may be used to ensure that all Parties are using environmental best practice when conducting EIAs. Guidelines for conducting EIAs have been circulated since the inception of the Madrid Protocol to assist with consistency and to attempt to standardize operations. The Council of Managers of National Antarctic Program (COMNAP) began this process by putting out guidelines for EIAs in 1992. Since then, Guidelines have been submitted to the ATCM and a revised publication of guidelines was adopted in 2005 at XXVIII ATCM. The guidelines offer operational advice in order for Parties to be able to effectively classify their projects and to know what steps they need to take in conducting the EIA process. Further objectives of the guidelines are to assist Parties who may have little experience of EIAs in Antarctica, to facilitate co-operation for joint projects and to facilitate comparison against other projects of similar natures and in similar environments.

Even though the EIA Guidelines were accepted at the ATCM, they are still only voluntary and Parties have no legal obligation to follow them, as long as they are still fulfilling the overarching obligations of the Protocol (Hemmings et al, 2010). Furthermore, it has been stated that the guidelines still fail to clear up the ambiguity within the EIA Annex and don't offer any solution for the definition of terms, which leads to questions of whether they are being used, as well as if they are effective in achieving their objectives.

Future Directions of the EIA Process

In order for the Antarctic EIA Process to be robust and to maintain integrity, it seems as though the terms which it uses need to be more solidified and debated in order to come up with set definitions. In particular, minor and transitory should be defined in order to outline specific impacts to the Antarctic environment. As this has been debated since the establishment of the Madrid Protocol, it is undoubtedly a difficult and complex issue to solve. In defining the terms, an inclusive view of all types of activities and environments within Antarctica will need to be accounted for. However, the definition of the terms would allow for less flexibility in EIA proposals and would hopefully result in a tightening of the grips on Antarctic activities to ensure that the Antarctic environment is conserved in years to come.

Furthermore, operational guidelines which are binding could be of particular use in order to ensure that EIAs are carried out in a robust and effective manner. This may be difficult to achieve consensus on through the ATCM since different Parties have different ideas of EIA and of activity within Antarctica, but perhaps this is what needs to be done in order to achieve positive outcomes through the EIA process. Having these guidelines would lessen the differences between the proposals that are presented to the ATCM and would arguably make the process more fair and equitable for all Parties involved, by standardizing the EIA approaches. As well as adding conformity to the EIA process, this may act to put environmental best practice at the forefront instead of administrative processes.

Conclusion

The Environmental Impact Assessment Annex as a part of the Madrid Protocol is a unique document, as it calls for international collaboration in achieving positive environmental outcomes for all Antarctic activities. However, operationally, the process could be improved by offering concrete definitions for terms, in particular minor and transitory, as well as by potentially standardizing the process for all Parties involved. This could be done by solidifying guidelines and by making them compulsory for all Parties who wish to undertake activities in Antarctica. Undoubtedly, the Antarctic EIA process will be a constantly evolving framework and will be integral to mitigating the impact that human activities have on the Antarctic environment now and into the future.

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